

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listings of Claims:

Claim 1 (currently amended): A fan array fan section in an air-handling system comprising:

- (a) at least six fan units;
- (b) said at least six fan units arranged in a fan array;
- (c) an air-handling compartment within which said fan array of fan units is positioned; and
- (d) an array controller for controlling said at least six fan units to run at substantially peak efficiency by strategically turning selective ones of said at least six fan units on and off, wherein each fan unit has a peak efficiency operating range outside of which it operates at a reduced efficiency, and wherein said array controller is programmed to operate said at least six fan units at substantially peak efficiency by strategically turning off at least one fan unit operating at reduced efficiency and running the remaining fan units within said peak efficiency operating range.

Claim 2 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein said at least six fan units are plenum fans.

Claim 3 (original): The fan array fan section in an air-handling system of claim 1, wherein said air-handling compartment has an airway path, said airway path being less than 72 inches.

Claim 4 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein said at least six fan units are a plurality of fan units arranged in a fan array configuration selected from the group consisting of:

- (a) a true array configuration;
- (b) a spaced pattern array configuration;

- (c) a checker board array configuration;
- (d) rows slightly offset array configuration;
- (e) columns slightly offset array configuration; and
- (f) a staggered array configuration.

Claim 5 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein said at least six fan units include at least two vertically arranged fan units.

Claim 6 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units is positioned within a fan unit chamber.

Claim 7 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units is suspended within a respective said fan unit chamber such that there is an air relief passage therebelow.

Claim 8 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units is positioned within a fan unit chamber having at least one acoustically absorptive insulation surface.

Claim 9 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units are mounted in a grid system.

Claim 10 (original): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units has a fan wheel diameter, wherein spacing between said at least six fan units is less than 60% of said fan wheel diameter.

Claim 11 (cancelled):

Claim 12 (cancelled):

Claim 13 (cancelled):

Claim 14 (cancelled):

Claim 15 (cancelled):

Claim 16 (cancelled):

Claim 17 (cancelled):

Claim 18 (cancelled):

Claim 19 (cancelled):

Claim 20 (cancelled):

Claim 21 (previously presented): The fan array fan section in an air-handling system of claim 1, further comprising an array of backdraft dampeners, each backdraft dampener in line with a respective fan unit.

Claim 22 (cancelled):

Claim 23 (cancelled):

Claim 24 (cancelled):

Claim 25 (previously presented): The fan array fan section in an air-handling system of claim 1, said array controller is programmed to operate said at least six fan units at peak efficiency for a performance level based on a criteria selected from the following group of criteria:

- (a) air volume;
- (b) level of air flow;
- (c) pattern of air flow; and
- (d) number of fan units to operate.

Claim 26 (cancelled):

Claim 27 (previously presented): The fan array fan section in an air-handling system of claim 1, said array controller is programmed to operate said at least six fan units to produce a stable operating point and eliminate the surge effects.

Claim 28 (cancelled):

Claim 29 (previously presented): The fan array fan section in an air-handling system of claim 1, said array controller is programmed to selectively control the speed of each of said at least six fan units to run at substantially peak efficiency.

Claim 30 (cancelled):

Claim 31 (previously presented): The fan array fan section in an air-handling system of claim 1, said air-handling compartment positionable within a structure such that said air-handling system conditions the air of said structure.

Claim 32 (previously presented): A fan array fan section in an air-handling system comprising:

- (a) a plurality of independently controllable fan units, each fan unit comprising an inlet cone, a fan, and a motor;
- (b) said plurality of fan units arranged in a fan array;
- (c) an air-handling compartment within which said fan array of fan units is positioned; and
- (d) an array controller for controlling said plurality of fan units to run at substantially peak efficiency by strategically turning selective ones of said plurality of fan units on and off.

Claim 33 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein said plurality of fan units are plenum fans.

Claim 34 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein said air-handling compartment has an airway path, said airway path being less than 72 inches.

Claim 35 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein said plurality of fan units are a plurality of fan units arranged in a fan array configuration selected from the group consisting of:

- (a) a true array configuration;
- (b) a spaced pattern array configuration;
- (c) a checker board array configuration;
- (d) rows slightly offset array configuration;
- (e) columns slightly offset array configuration; and
- (f) a staggered array configuration.

Claim 36 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein said plurality of fan units include at least two vertically arranged fan units.

Claim 37 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein each of said plurality of fan units is positioned within a fan unit chamber.

Claim 38 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein each of said plurality of fan units is suspended within a respective said fan unit chamber such that there is an air relief passage therebelow.

Claim 39 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein each of said plurality of fan units is positioned within a fan unit chamber having at least one acoustically absorptive insulation surface.

Claim 40 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein each of said plurality of fan units is mounted in a grid system.

Claim 41 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein each of said plurality of fan units has a fan wheel diameter, wherein spacing between said plurality of fan units is less than 60% of said fan wheel diameter.

Claim 42 (previously presented): The fan array fan section in an air-handling system of claim 32, further comprising an array of backdraft dampeners, each backdraft dampener in line with a respective fan unit.

Claim 43 (previously presented): The fan array fan section in an air-handling system of claim 32, wherein each fan unit has a peak efficiency operating range outside of which it operates at a reduced efficiency, wherein said array controller is programmed to operate said plurality of fan units at substantially peak efficiency by strategically turning off at least one fan unit operating at reduced efficiency and running the remaining fan units within said peak efficiency operating range.

Claim 44 (previously presented): The fan array fan section in an air-handling system of claim 32, said array controller is programmed to operate said plurality of fan units at peak efficiency for a performance level based on a criteria selected from the following group of criteria:

- (a) air volume;

- (b) level of air flow;
- (c) pattern of air flow; and
- (d) number of fan units to operate.

Claim 45 (previously presented): The fan array fan section in an air-handling system of claim 32, said array controller is programmed to operate said plurality of fan units to produce a stable operating point and eliminate the surge effects.

Claim 46 (previously presented): The fan array fan section in an air-handling system of claim 32, said array controller is programmed to selectively control the speed of each of said plurality of fan units to run at substantially peak efficiency.

Claim 47 (previously presented): The fan array fan section in an air-handling system of claim 32, said air-handling compartment positionable within a structure such that said air-handling system conditions the air of said structure.